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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/699,730   | 11/04/2003  | Rong-Ho Lee          | 3313-1052P          | 6431             |
| 2292   | 7590        | 03/09/2006           | EXAMINER            |                  |
| BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | HODGES, MATTHEW P   |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2879                |                  |

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/699,730

Applicant(s)

LEE ET AL.

Examiner

Matt P. Hodges

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-14 is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

The Amendment, filed on 12/12/2005, has been entered and acknowledged by the Examiner.

Cancellation of claims 2 and 8 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thagard et al. (US 6,356,031) in view of Frischknecht. (US 2004/0135268 A1).

Regarding claims 1 and 3, Thagard discloses (see figure 1) a self-charging organic EL display module including a first substrate (12), a solar cell (14, 16, and 18) formed on the first substrate, a second substrate (28), and an organic EL device (22, 24, and 26) formed on the second substrate. The unit is packaged together and the solar cell powers the EL device. Thagard does not appear to specify the use adhesive between the first and second substrates. However Frischknecht, in the same field of endeavor, discloses the use of a packaging adhesive to attach a first and second substrate around organic elements. The use of packaging adhesive at either end of the device substrate advantageously prevents moisture and oxygen from permeating the elements and decreasing the lifespan of the device. Further the use of a packaging adhesive

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allows for easy placement and faster manufacture of the device. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use packaging adhesive between the first and second substrates as taught by Frischknecht, into the device as taught by Thagard in order to advantageously prevent moisture and oxygen from permeating the elements and decreasing the lifespan of the device.

Regarding claim 5, Thagard further discloses the solar cell being inorganic. (Column 1 lines 52-58).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thagard et al. (US 6,356,031) in view of Frischknecht. (US 2004/0135268 A1) and further in view of Hashimoto (US 4,963,196).

Regarding claim 6, Thagard in view of Frischknecht discloses the device as claimed (see rejection of claim 1 above) but does not appear to specify the use of an organic solar cell. However Hashimoto, in the same field of endeavor, discloses the use of organic solar cells instead of inorganic solar cells to decrease production cost. (Column 1 lines 16-22). Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the organic solar cell as taught by Hashimoto, into the device as taught by Thagard in view of Frischknecht in order to advantageously decrease production cost.

Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2004/0119401 A1) in view of Frischknecht. (US 2004/0135268 A1).

Regarding claim 7, Lee discloses (see figure 1) a self-charging organic EL display module including a first substrate (100), a solar cell (132) formed on the first substrate, and an organic EL device (130) formed on the first substrate away from the solar cell. The unit is packaged together and the solar cell powers the EL device. (Paragraphs 0015-0016). Lee does not appear to specify the use of an encapsulating layer surrounding the organic elements. However Frischknecht, in the same field of endeavor, discloses the use of an encapsulating layer surrounding the organic elements. The encapsulating layer is formed from a cover layer attached to the device substrate by packaging adhesive at either end of the device substrate. Encapsulating organic elements advantageously prevents moisture and oxygen from permeating the elements and decreasing the lifespan of the device. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use of an encapsulating layer surrounding the organic elements as taught by Frischknecht, into the device as taught by Lee in order to advantageously prevent moisture and oxygen from permeating the elements and decreasing the lifespan of the device.

Regarding claim 10, Lee further discloses the solar cell being organic. (Paragraph 0010).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (US 2004/0119401 A1) in view of Frischknecht. (US 2004/0135268 A1) and further in view of Kondo et al. (US 5,828,117).

Regarding claim 9, Lee in view of Frischknecht discloses the device as claimed (see rejection of claim 7 above) but does not appear to specify the use of an inorganic solar cell. However Kondo, in the same field of endeavor, discloses the use of inorganic solar cells.

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Inorganic solar cells advantageously allow for greater resistance to moisture and oxygen than organic solar cells thus leading to a higher life span. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the organic solar cell as taught by Kondo, into the device as taught by Lee in view of Frischknecht in order to advantageously allow for greater resistance to moisture and oxygen than organic solar cells thus leading to a higher life span.

Claims 1, 3-6 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamitani et al. (JP 408054479A) in view of Frischknecht. (US 2004/0135268 A1).

Regarding claims 16, Minamitani discloses (see figure 1) a self-charging organic EL display module including a first substrate (13), a solar cell (14) formed on the first substrate, and an organic EL device (15) formed on the first substrate on an opposite side from the solar cell. The unit is packaged together and the solar cell powers the EL device. Minamitani does not appear to specify the use of encapsulating layers surrounding the organic elements. However Frischknecht, in the same field of endeavor, discloses the use of encapsulating layers surrounding organic elements. The encapsulating layers are formed from a cover layer attached to the device substrate by packaging adhesive at either end of the device substrate. Encapsulating organic elements advantageously prevents moisture and oxygen from permeating the elements and decreasing the lifespan of the device. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use of encapsulating layers surrounding the organic elements as taught by Frischknecht, into the device

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as taught by Minamitani in order to advantageously prevent moisture and oxygen from permeating the elements and decreasing the lifespan of the device.

Regarding claims 17 and 18, Minamitani further discloses the solar cell being either organic or inorganic. (Paragraphs 0010, 0013, and 0017).

Regarding claims 1 and 3-6, Minamitani alternatively discloses (see figures 1 and 2) a self-charging organic EL display module including a first substrate (13), a solar cell (14) formed on the first substrate, and an organic EL device (15), which further consist of a second substrate 41 formed on the first substrate on an opposite side from the solar cell. The unit is packaged together and the solar cell powers the EL device. Minamitani does not appear to specify the use of encapsulating layers surrounding the organic elements. However Frischknecht, in the same field of endeavor, discloses the use of encapsulating layers surrounding organic elements. The encapsulating layers are formed from a cover layer attached to the device substrate by packaging adhesive at either end of the device substrate. Encapsulating organic elements advantageously prevents moisture and oxygen from permeating the elements and decreasing the lifespan of the device. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use of encapsulating layers surrounding the organic elements as taught by Frischknecht, into the device as taught by Minamitani in order to advantageously prevent moisture and oxygen from permeating the elements and decreasing the lifespan of the device.

***Allowable Subject Matter***

Claims 11-14 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 11, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 11, and specifically comprising the limitation of a self charging organic EL device where a solar cell and EL element are formed on a common substrate with an opaque insulating layer formed between.

Regarding claims 12-14, claims 12-14 are allowable for the reasons given in claim 11 because of their dependency status from claim 11.

***Response to Arguments***

Applicant's arguments filed 12/12/2005 have been fully considered but they are not persuasive.

Regarding applicant's assertion that the claimed invention is distinguished in part because the solar cell and display do not share a common negative electrode, the examiner respectfully indicates that the recitation of not sharing a negative electrode does not appear to be included in the device as claimed. Further, it is the view of the examiner that the devices disclosed in the prior art are all capable of self-charging.

Regarding applicant's assertion that the claimed invention is distinguished in part because the solar cell and display can effectively control the charging function through the use of an external loop, the examiner respectfully indicates that the stated recitation does not appear to



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be included in the device as claimed. Further, it is the view of the examiner that the devices disclosed in the prior art do include an external loop.

Regarding applicant's assertion that the claimed invention is distinguished in part because the solar cell and display can be manufactured with similar technologies, the examiner respectfully indicates a product is not distinguished from the prior art by the method of manufacture unless that method imparts non-obvious structural differences.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**ASHOK PATEL**  
**PRIMARY EXAMINER**